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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,708	09/06/2005	Yoshitaka Sato	GUA UTO 318	8392

7590 11/15/2006

The Gates Corporation
1551 Wewatta Street
Denver, CO 80202

EXAMINER

PILKINGTON, JAMES

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/523,708		SATO ET AL.	
	Examiner		Art Unit	
	James Pilkington		3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/15/06</u> & <u>2/04/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takehiko Ito, USP 2001/0039226, in view of Kumazaki, USP 5,674,143.

Re clms 1 and 3, Takehiko ('226) discloses a transmission belt (60) comprising: a belt body (62) which is molded from a stock rubber; aramid fibers (80, 114) that are intermixed in said belt body (62) and oriented in a predetermined direction of said belt body (p 3, paragraphs 51, 52, 53) ; and polyester fibers (80, 114) that are intermixed in said belt body (62) and oriented in said predetermined direction (p 3, paragraphs 51, 52, 53) ; wherein said polyester fibers are longer than said aramid fibers(p 3, paragraphs 51, 52, 53) .

Ito does not disclose that the fibers make up 5-30 parts by weight of the stock rubber of the belt.

Kumazaki teaches that a belt can be made of a combination of aramid and polyester fibers (C4/L43-55) and that the fibers make up 5-30 parts by weight of the

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stock rubber of the belt (C4/L56-60) for the purpose of reducing the noise in the belt and increase durability (C5/L1-9).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Ito and provide a belt can be made of a combination of aramid and polyester fibers, as taught by Kumazaki, for the purpose of reducing the noise in the belt and increase durability.

Re clm 2, Takehiko ('226) discloses the aramid fibers (114) and polyester fibers (114) are oriented in a width direction of said belt body (p 3, paragraph 53).

Re clm 4, Takehiko ('226) discloses length of said aramid fibers (114) is less than 3 mm (p 3, paragraph 52, fibers range from 1 to 10 mm).

Re clm 5, Takehiko ('226) discloses the length of said polyester fibers (114) is less than 5 mm (p 3, paragraph 52, fibers range from 1 to 10 mm).

Re clm 6, Takehiko ('226) discloses a rubber component of said stock rubber is one of ethylene propylene copolymer, ethylene propylene, diene nitrile butadiene rubber, hydrogenated terpolymer, nitrile butadiene rubber, and chloroprene rubber (p 3, paragraph 51).

Re clm 7, Takehiko ('226) discloses the said polyester fibers are subjected to a treatment involving coating with a resorcinol-formalin-latex (p 3, paragraph 55).

Re clm 9, Kumazaki ('143) discloses that the aramid fibers can be para-aramid fibers (C4/L48-49).

Re clm 10, Takehiko ('226) discloses said transmission belt is a V-belt (60, see figure 3, sides at angle).

Re clm 11, Takehiko ('226) discloses said V-belt (60) is a cogged V-belt (see figure 1, 72,74).

Re clm 12, Takehiko ('226) discloses a transmission belt (60) comprising: a belt body (62) which is obtained and molded from a stock rubber in which aramid fibers (114) and polyester fibers (114) are intermixed (p 3, paragraph 50, 51, 52); and said polyester fibers being longer than said aramid fibers (p3, paragraph 52); wherein said aramid fibers (114) and said polyester fibers (114) are oriented in a predetermined direction of said belt body (62) (p3, paragraph 53).

Re clms 13 and 14, Takehiko ('226) discloses a transmission belt (60) comprising: a belt body (62) which is molded from a stock rubber comprising a top rubber layer (82), a bottom rubber layer (80) and a cord (84) extending in the longitudinal direction of the belt embedded between the top rubber layer (82) and the bottom rubber layer (80) said bottom layer (80) having cogs (70 and 72); aramid fibers (80, 114) that are intermixed in said belt body (62) and oriented in a predetermined direction of said belt body (p 3, paragraphs 51, 52, 53) ; and polyester fibers (80, 114) that are intermixed in said belt body (62) and oriented in said predetermined direction (p 3, paragraphs 51, 52, 53) ; wherein said polyester fibers are longer than said aramid fibers(p 3, paragraphs 51, 52, 53); the length of said aramid fibers (114) is less than 3 mm (p 3, paragraph 52, fibers range from 1 to 10 mm) and the length of said polyester fibers (114) is less than 5 mm (p 3, paragraph 52, fibers range from 1 to 10 mm) .

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Ito does not disclose that the belt body is made of both aramid fibers and polyester fibers and that the fibers make up 5-30 parts by weight of the stock rubber of the belt.

Kumazaki teaches that a belt can be made of a combination of aramid and polyester fibers (C4/L43-55) and that the fibers make up 5-30 parts by weight of the stock rubber of the belt (C4/L56-60) for the purpose of reducing the noise in the belt and increase durability (C5/L1-9).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Ito and provide a belt can be made of a combination of aramid and polyester fibers, as taught by Kumazaki, for the purpose of reducing the noise in the belt and increase durability.

3. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takehiko '226 in view of Kumazaki '143 and further in view of Kodama, USP 5,908,520.

Takehiko in view of Kumazaki discloses all of the claim limitations (as described above).

Takehiko in view of Kumazaki does not disclose said polyester fiber is one of PET fiber.

Kodama teaches PET fiber to be a polyester fiber (c2, l 12-13). PET fiber has a higher modulus of elasticity than other fibers. This allows for an increase in strength of the composition that the PET fiber is a component of.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to use PET fiber as the polyester fiber, as taught by Kodama, in the v-belt of Takehiko in view of Kumazaki, to increase the modulus of elasticity of the belt.

Response to Arguments

Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Pilkington whose telephone number is 571-272-5052. The examiner can normally be reached on 7:30am-4pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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RICHARD RIDLEY
SUPERVISORY PATENT EXAMINER